TYPICAL 1" OR SMALLER
WATER METER INSTALLATION

NOTE: ALL INSULATION FOR WATER METERS WILL BE COMPLETED BY THE CITY.
TYPICAL 1 1/2" OR 2" WATER METER INSTALLATION
(USING COPPER CUSTOM SETTER)

NOTE:
ALL INSULATION FOR WATER METERS WILL BE COMPLETED BY THE CITY.
TYPICAL SECTION

REQUIREMENTS FOR CONCRETE COLLARS:
1. CONCRETE: 3/4", 7 SACK, 4000 PSI AT 28 DAYS, 2" TO 4" SLUMP, 4-7% AIR.
2. COLLAR TO BE FORMED AND UNIFORM SHAPED.
3. SMOOTH BROKEN FINISH REQUIRED.
4. CONTRACTOR TO STAMP OR TOOL AN ARROW, 6 INCHES IN LENGTH INTO THE CONCRETE COLLAR INDICATING FLOW DIRECTION.
5. APPLY CONCRETE CURING COMPOUND.
6. PROTECT FROM TRAFFIC FOR 4 DAYS MINIMUM.

VALVE CONCRETE COLLAR DETAIL
IN ASPHALT STREETS, GRAVEL STREETS, OR NATURAL GROUND

CONSTRUCTION JOINTS
1/4" DEEP, TYP.

CONCRETE COLLAR
UNIFORMLY SAW CUT
ASPHALT PAVEMENT
2½" X 2½" TALL DEPTH.
SEAL ALL CULTIVATED CONCRETE COLLAR.

PLAN

6" MIN.
LOCATION ABOVE 1/2" HOLE IN VALVE BOX WITH RUBBER GROMMET
CONCRETE COLLAR REINFORCED SQUARE OR ROUND
VALVE BOX

UNIFORM FINISH

6¼ HOOP, 2 REINFORCED

GRAY: 5% STREET ROAD SHOULDERS, OR NATURAL GROUND

ASPHALT CONCRETE PAVEMENT

REV 1

FIGURE W5

REVISION DATE
ORIGINAL DEVELOPMENT MARCH 2021

CITY OF BOARDMAN, OREGON
STANDARD DRAWING WATER
VALVE CONCRETE COLLAR DETAILS
FIRE HYDRANT AND AUXILIARY VALVE DETAIL
FIRE HYDRANT BARRICADE

NOTES

1. 4" DIAMETER STEEL PIPE SHALL BE PLUMB.

2. LOCATE PIPES EQUIDISTANT FROM FIRE HYDRANT.

3. PAINTING SHALL BE DONE ONLY AFTER SURFACE IS FREE OF RUST, OIL, AND OXIDATION. THE METAL SHALL BE primED AND TWO FINISH COATS, YELLOW IN COLOR APPLIED.

CITY OF BOARDMAN, OREGON
STANDARD DRAWING
WATER

REVISION   DATE
ORIGINAL DEVELOPMENT   MARCH 2021

FIGURE W7

REVISED DEVELOPMENT   DATE

FIRE HYDRANT BARRICADE
NOTE:
The contractor shall provide two references from permanent objects to the end of water service line. These ties shall be shown and dimensioned on the "record drawings" prepared by the contractor.

TYPICAL WATER MAIN STUB
SECTION N.T.S.

TYPICAL WATER SERVICE LINE STUB
SECTION N.T.S.
WATER-SEWER CROSSING
NEW WATER LINE CONSTRUCTION

NOTES:
1. PROVIDE SUPPORT BEAM WHEN REQUIRED. SEE SPECIFICATIONS.

2. ALL BACK FILL IN AREA OF WATER-SEWER CROSSING TO A DEPTH 12" ABOVE THE TOP OF THE HIGHEST PIPE SHALL BE 3:1:6 BASE DIRT COMPACTED TO 90% OF ASTM D-698 LABORATORY DENSITY.

WATER-SEWER CROSSING
NEW WATER LINE CONSTRUCTION

Π.Π.
THRU.SHT BLOCK NOTES
1. THRU.SHT BLOCKS SHALL BE LOCATED AT THE FOLLOWING LOCATIONS:
   A. ALL CHANGES IN DIRECTION.
   B. ALL SHANKS.
   C. ALL VALVES, 6" AND LARGER FITTINGS FOR CLOSED CONDITIONS.
   D. AT TURNING POINTS REQUIRED TO PROVIDE SUPPORT OR LIMITATION AS REQUIRED FOR GROUNDED OR TURBID PRESSURE TESTS.
   E. AT CORNER LOCATIONS REQUIRED BY THE CODE.
   F. THRU.SHT BLOCKS SHALL BE SET AS REQUIRED BY THE SOIL CONDITIONS AND DESIGN FIRMNESS.
   G. PLACE CONCRETE FACING UN-SETTLED QUICK-DRY WALL.
   H. CONCRETE SHALL BE 2,000 PSI MINIMUM.
   I. ALL CONCRETE SHALL BE PLACED SO THAT PIPE, FITTING JOINTS, DIFTS AND VALVES, ETC., WILL BE ACCESSIBLE FOR REPAIR.
   J. PLACE THE TURNS OF VALVES BETWEEN FITTINGS AND CONCRETE TO FACILITATE FUTURE REPLACEMENT OF THRU.SHT BLOCKS IF REQUIRED.
   K. THE LOCATION OF THE JUNCTION OF THRU.SHT BLOCKS WITH 6'-0" STRAIGHT PIPE Extends TO THE OUTSIDE OF THE BUILDING, EXCEPTING THE 2'-0" MINIMUM CLEARANCE AT REAR OF BUILDING.
   L. THRU.SHT BLOCKS SHALL BE SET FOR 150 PSI WATER PRESSURE
   M. IF THE REQUIRED BEARING AREA IS LESS THAN 1 SQUARE FOOT, A THRU.SHT BLOCK SHALL NOT BE REQUIRED.

DETERMINATION OF THRU.SHT BLOCK BEARING AREA

THE REQUIRED FITTING BEARING AREA IS NOT INCLUDED IN THE PLANS OR AS DESIGNED BY THE PROJECT ENGINEER. THE FOLLOWING PROCEDURE SHALL BE USED TO DETERMINE BEARING REQUIREMENTS.

1. DETERMINE THRU.SHT TYPE OF FITTING OR JOINT AND SIZE OF PIPE FROM TABLE 1 (OR TABLE 2).
2. DETERMINE BEARING CAPACITY 0F SOIL FROM TABLE 2.
3. DETERMINE REQUIRED BEARING AREA (A) AS FOLLOWS:
   A = T x B
   WHERE T = FITTING OR JOINT TYPE
   B = CAN BE DETERMINED FROM TABLE 1.

EXAMPLE DESIGN PRESSURE = 175 PSI

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<th>THRUST AT FITTINGS</th>
<th>THRUST AT JOINTS</th>
<th>THRUST AT 6&quot;</th>
<th>THRUST AT 4&quot;</th>
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TABLE 2

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<th>PIPE SIZE</th>
<th>SIDE THRU.SHT</th>
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MULTIPLY THRU.SHT BY SIDE THRU.SHT TO OBTAIN TOTAL THRUST

TYPICAL THRUST BLOCK LOCATIONS

SECTION VIEWS

CITY OF BOARDMAN, OREGON
STANDARD DRAWING
WATER
THRU.SHT BLOCK DETAILS

REVISED DATE
ORIGINAL DEVELOPMENT
MARCH 2021

FILE NUMBER W12